



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

PL

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/138,926 08/24/98 CESARE

F D-6362

EXAMINER
----------

IM62/0223

RAYMOND D. THOMPSON  
UNIROYAL CHEMICAL COMPANY INC  
WORLD HEADQUARTERS  
MIDDLEBURY CT 06749

NOLAN, S

ART UNIT	PAPER NUMBER
----------	--------------

1772

DATE MAILED:

3  
02/23/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
09/138,926

Applicant(s)  
CESARE et al

Examiner  
Sandra Nolan

Group Art Unit  
1772



☒ Responsive to communication(s) filed on Sep 21, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-28 is/are pending in the application

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-28 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 1772

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement submitted on September 21, 1998 (Paper No. 2) has been considered. A copy of the initialed form PTO 1449 is enclosed.

### *Claim Rejections - 35 USC § 112*

- W/D  
1
2. Claims 1, 6-14 and 19-28 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicants' examples show only terpolymers containing 5-ethylidene-2-norbornene (Example 1) as operable in the invention. The claims should be limited to these terpolymers and analogs thereof, such as those recited in claims 2 and 15.

- W/D
3. Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "optionally" renders the claims indefinite. It is suggested that Applicants use dependent claims to cover any nonessential component(s).

### *Claim Rejections - 35 USC § 102*

- lita  
F.2 (b)
4. Claims 1-4 and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Gros (US 3,884,993) and Allen et al (EPO 0246745B1).

10 3 subject matter covered by Allen et al.

Art Unit: 1772

Gros shows terpolymers of ethylene, propylene and norbornenes (col. 2, lines 35+) having molecular weights of less than 15,000 (col. 5, lines 6+). The use of 10 to 200 phr filler is disclosed as col. 6, lines 38+. Belts and hoses are recited at col. 7, line 8.

Allen et al disclose similar terpolymers having molecular weights of 1,000 to 15,000 (page 2, lines 49+). The terpolymers contain Applicants' monomers in their amounts (page 3, lines 11+). Fillers are disclosed (page 6, Table I).

The properties recited in claim 9 are inherent in the polymers of Gros and Allen et al.

***Claim Rejections - 35 USC § 103***

Claims 4-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frances (US 4,514,541) in view of Gros and Allen et al.

Frances teaches compositions containing ethylene/propylene/diene elastomers (col. 1, line 62) and 10-60% aramid fiber pulp (abstract). The compositions are used as is or as masterbatches to incorporate the aramid fibers into formulations containing the same or different elastomers to prevent the fibers from "ball[ing] up" (col. 1, lines 19-26 and col. 2, lines 3-5). He does not disclose the ethylene/propylene/norbornene terpolymers that Applicants recite in claims 2-5.

Gros and Allen et al are discussed above. Each discloses the use of their terpolymers in formulations containing other elastomers. See the abstract of Gros and page 2, lines 49+ of Allen et al. Neither teaches the use of aramid fibers, or Applicants' amounts thereof.

Art Unit: 1772

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to employ the terpolymers of Gros and Allen et al in the masterbatches of Frances for use in facilitating the dispersion of the aramid fibers therein into elastomers.

6. Claims 14-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bushway et al (US 4,833,191) in view of Frances taken with Gros and Allen et al.

Bushway et al disclose the use of low molecular weight polymers to assist the dispersion of fibers into higher molecular weight elastomers (abstract). The low molecular weight polymers (col. 4, lines 7+) may be terpolymers. The low molecular weight polymers are used to disperse fibers, such as aramid pulp (col. 1, line 51), rapidly and homogeneously into rubber stock (col. 2, lines 50-54). The stock can then be used to make V-belts (col. 1, line 26). Patentees do not disclose Applicants' norbornene-containing terpolymers.

Gros, Allen et al and Frances are discussed above.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to employ the terpolymers of Gros and Allen et al, along with the amounts of aramid fibers taught by Frances, as masterbatches in the preparation of rubber stocks, such as those of Bushway et al and to make articles therewith.

7. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bushway et al in view of Frances taken with Gros and Allen et al as applied to claims 14-28 above, and further in view of Oyama et al (US 5,556,919).

Gros, Allen et al, Frances and Bushway et al are discussed above.

Art Unit: 1772

Oyama et al show, at col. 18, lines 36+, the production of belts, hoses and diaphragms. Their compositions contain EPDM rubbers (abstract) and aramid fibers (col. 11, line 27). They do not show Applicants' terpolymers or masterbatches containing them.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to employ the rubber stocks suggested by the combination of Bushway et al with Gros, Allen et al and Frances to make various belts, hoses and diaphragms, such as those suggested by Oyama et al.

### *Conclusion*

Any inquiry concerning this communication should be directed to Sandra M. Nolan, whose telephone number is (703) 308-9545. The examiner can normally be reached on Monday through Thursday from 7:00 am to 4:00 pm. She can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ellis P. Robinson, can be reached on (703) 308-2364. The fax phone number for the art unit is (703) 305-5408. The telephone number for the receptionist is (703) 308-0661.



S. M. Nolan  
Patent Examiner  
Technology Center 1700